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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte HOWARD W. LUTNICK, BIJOY PAUL,
and MICHAEL SWEETING

Appeal 2015-003909
Application 12/399,570
Technology Center 3600

Before HUBERT C. LORIN, BIBHU R. MOHANTY, and
BRADLEY B. BAYAT, *Administrative Patent Judges*.

BAYAT, *Administrative Patent Judge*.

DECISION ON APPEAL[1]

STATEMENT OF THE CASE

Appellants[2] appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1–5, 7–14, 16–22, and 24–39. We have jurisdiction under 35 U.S.C. § 6(b).

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[1] Our decision references Appellants' Appeal Brief ("Appeal Br.," filed Oct. 20, 2014), Reply Brief ("Reply Br.," filed Feb. 4, 2015), and the Examiner's Answer ("Ans.," mailed Dec. 4, 2014) and Final Office Action ("Final Act.," mailed Aug. 29, 2013).

[2] Appellants identify "CFPH, L.P." as the real party in interest (Appeal Br. 5).

SUMMARY OF DECISION

We AFFIRM.

THE INVENTION

Appellants' claimed invention relates to exchange trading financial instruments (Spec. para. 81). Claim 1, reproduced below with bracketed numerals added, is illustrative of the subject matter on appeal.

1. An apparatus comprising:

[1] a matching engine of a financial exchange, in which the matching engine is configured to:

[2] receive indications of orders, in which each order defines a respective side of a trade for a financial instrument, and in which each indication is received from a respective remote machine,

[3] add each of the orders to a respective one of a queue of buy orders and a queue of sell orders for the financial instrument,

[4] determine that at least a first order in the queue of buy orders and a second order in the queue of sell orders match, and

[5] execute a trade that fulfill the first order and the second order;

[6] an event engine, of the financial exchange configured to:

[7] receive an indication of an occurrence of an event,

[8] determine that placement of an order is conditioned on the occurrence, in which the order defines a side of a trade for the financial instrument; and

[9] in response to the determination, transmit an indication to add the order to a respective one of the queue of buy orders the queue of sell orders to the

matching engine through a data bus of the financial exchange; and

[10] the data bus of the financial exchange, in which the data bus is configured to allow communication of the indication to add the order from the event engine to the matching engine.

THE REJECTIONS

The Examiner relies upon the following as evidence of unpatentability:

Tupper	US 2003/0093362 A1	May 15, 2003
Duesterwald	US 2003/0192035 A1	Oct. 9, 2003
Nafeh	US 2007/0233594 A1	Oct. 4, 2007
Mather	US 2007/0265954 A1	Nov. 15, 2007
Walsky	US 2008/0097893 A1	Apr. 24, 2008

The following rejections are before us for review:

1. Claims 1–5, 7–14, 16–22, and 24–39 stand rejected under 35 U.S.C. § 101 as being directed to ineligible subject matter.

2. Claim 36 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Appellants regard as the invention.

3. Claims 1, 7–10, 16–18, 24–27, 29–31, and 34–38 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Mather, Nafeh, and Walsky.

4. Claims 2–5, 11–14, 19–22, and 32–33 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Mather, Nafeh, Walsky, and Duesterwald.

5. Claims 28 and 39 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Mather, Nafeh, Walsky, Duesterwald, and Tupper.

ANALYSIS

Non-statutory Subject Matter

The Supreme Court has set forth "a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice*, 134 S. Ct. 2347, 2355 (2014) (citing *Mayo*, 132 S. Ct. 1289, 1296–97 (2012)). According to the Supreme Court's framework, it must first be determined whether the claims at issue are directed to one of those concepts (i.e., laws of nature, natural phenomena, and abstract ideas). *Id.* If so, a second determination must be made to consider the elements of each claim both individually and "as an ordered combination" to determine whether the additional elements "transform the nature of the claim" into a patent-eligible application. *Id.* (quoting *Mayo*, 132 S. Ct. at 1298, 1297).

To that end, with regard to the first part of the *Alice* inquiry, the Examiner finds that the claims are directed to "the abstract idea of a basic financial practice of trading on an exchange using 'engines'" and therefore ineligible subject matter under 35 U.S.C. § 101 (Ans. 5) with which we agree. With regard to the second part of the *Alice* inquiry, the Examiner determines that "using a generic 'exchange' or public 'exchange' with an event engine and matching engine . . . does not limit the claims sufficiently or add concrete ties to make the claims less abstract" (*id.*). The Examiner has applied this analysis to all the claims in the rejection.

Appellants first argue that the Examiner "provides no evidence to support" the conclusion that the claims are drawn to an abstract idea and

therefore has not provided "the substantial evidence required by the APA to make a finding of fact" (Reply Br. 11).

We do not agree. As noted above, the Examiner clearly identified the abstract idea to which the claims as a whole are directed. This is sufficient to identify the judicially excluded category under *Alice*. There is no requirement to make factual findings or produce evidence in making a rejection under 35 U.S.C. § 101. *See, e.g.*, "July 2015 Update: Subject Matter Eligibility" to the "2014 Interim Guidance on Subject Matter Eligibility (2014 IEG) published on Dec. 16, 2014 (79 Fed. Reg. 74618)":

> The courts consider the determination of whether a claim is eligible (which involves identifying whether an exception such as an abstract idea is being claimed) to be a *question of law*. Accordingly, courts do not rely on evidence that a claimed concept is a judicial exception, and in most cases resolve the ultimate legal conclusion on eligibility without making any factual findings.

Id. at 6, para. 3 (emphasis added) (footnote omitted). Evidence may be helpful in certain situations where, for instance, facts are in dispute. But it is not always necessary. It is not necessary in this case. We note that the Appellants have put forward no rebuttal evidence showing claim 1 is *not* directed to an abstract idea.

Appellants' second argument is that the invention "uses specifically arranged technology of engines to perform concrete actions of trading" (Reply Br. 11). According to Appellants, "[t]his specific application of trading using engines is not manifestly abstract and therefore is not an abstract idea" (*id.*).

We do not agree. The Court in *Alice* also addressed claims directed to electronic trading — specifically trading through a third-party intermediary. *Alice*, 134 S. Ct. at 2356. The Court concluded that the claims were "drawn to the concept of intermediated settlement" and that "intermediated settlement, like hedging [in *Bilski*], is an 'abstract idea' beyond the scope of § 101." *Id.* Accordingly, Appellants' argument does not apprise us of error in the Examiner's determination that the claims are directed to an abstract idea.

Third, Appellants argue that "the Examiner fails to show that each and every limitation of each and every claim taken both together and separately do not add significantly more than the alleged abstract idea" (Reply Br. 11).

Fourth, Appellants contend that the claims "recite a novel and non-obvious structure for an exchange system or method of operating an exchange" (*id.*). According to Appellants, "[a]s described in the specification, these arrangements improve over traditional exchanges and therefore add significantly more to the alleged abstract idea of trading on an exchange using engines" (*id.*).

Appellants' argument regarding "novel and non-obvious structure" is not a persuasive argument. An abstract idea does not transform into an inventive concept just because the prior art does not disclose or suggest it. We also note that the Appellants have not pointed to any specific improvement in computer technology or any other technology or technical field described in the Specification.

As in *Alice*, "the . . . claims do not, for example, purport to improve the functioning of the computer itself," "[n]or do they effect an improvement

in any other technology or technical field." *Alice*, 134 S. Ct. at 2359. As in *Alice*, the functions performed by the claimed engines amount to "basic functions of a computer." *Id.* For example, in the method of claim 9, the recited functions of receiving conditions, receiving indications, determining events, transmitting instructions through a bus, and adding an order to a queue are all well-understood, routine, conventional activities previously known to the industry. Claim 18 similarly recites steps of receiving an indication, determining conditions, and transmitting instructions through a bus. As in *Alice*, "each step does no more than require a generic computer to perform generic computer functions." *Alice*, 134 S. Ct. at 2359. *Cf. id.* ("[T]he use of a computer to obtain data, adjust account balances, and issue automated instructions . . . are 'well-understood, routine, conventional activit[ies]' previously known to the industry." (quoting Mayo, 132 S. Ct. at 1294)). The Specification supports the view that the computer implementation is purely conventional (*see* Spec. para. 55 ("the various processes described herein may be implemented by, e.g., appropriately programmed general purpose computers, special purpose computers and computing devices.")). Regarding the claimed "matching engine" the Specification discloses that matching engine 207 "may include general purpose processors configured to matching orders . . . via hardware and/or software" (*id.* at para. 95). Regarding the claimed "event engine" the Specification similarly discloses that "event engine 213 may include a processor, a memory, and/or any other component" (*id.* at para. 108). The matching and event engines may be implemented in a single general purpose computer (*see id.* at para. 118 ("a bus may directly couple event engine and

matching engine in a same machine.")). Adding an order to a queue may be implemented by simply storing data in a memory location in the general purpose computer (*see id.* at para. 98 ("a set of memory locations that include orders may be prioritized by a linked list . . . [or] any other method of ordering memory and/or storing and/or prioritizing orders may be used"). Executing software and allowing communication between software components via memory locations is "one of the most basic functions of a computer." *Alice*, 134 S. Ct. at 2359. Indeed, nearly every computer will include a data bus configured to allow communication between programs via memory locations. *Cf. id.* at 2360 ("Nearly every computer will include a 'communications controller' and 'data storage unit' capable of performing the basic calculation, storage, and transmission functions required by the method claims.")

Thus, "the claims at issue amount to 'nothing significantly more' than an instruction to apply the abstract idea . . . using some unspecified, generic computer." *Alice*, 134 S. Ct. at 2360 (quoting *Mayo*, 132 S. Ct. at 1298). We reach the same conclusion as to system claim 1. As in *Alice*, "[t]he method claims recite the abstract idea implemented on a generic computer; the system claims recite a handful of generic computer components configured to implement the same idea." *Id.* "[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention. Stating an abstract idea 'while adding the words 'apply it' is not enough for patent eligibility." *Id.* at 2358 (quoting *Mayo*, 132 S. Ct. at 1294).

Accordingly, Appellants' arguments do not apprise us of error in the rejection under 35 U.S.C. § 101.

Indefiniteness

We are persuaded by Appellants' argument that the Examiner erred in rejecting claim 36 under 35 U.S.C. § 112, second paragraph (Appeal Br. 77), and, therefore, we do not sustain the rejection of claim 36 as indefinite.

The Examiner finds that the phrase "regulations that regulate an industry" in claim 36 is indefinite because "[A]pplicant does not properly define these in the [S]pecification and they are changeable rates, regulations or events, thus are indefinite" (Final Act. 5).

However, we agree with Appellants that the term "regulations" "is a well-known term, and while it may be broad, it is not indefinite." (Appeal Br. 77). Here, a person of ordinary skill in the art would understand what is claimed. The fact that Appellants have not included an explicit definition in the Specification does not, in and of itself, result in a determination that one of ordinary skill in the art would not understand the claim.

Obviousness

Independent claim 1

Regarding independent claim 1, the Examiner finds the functions of the claimed "matching engine" (limitations [1]–[5]) and the claimed "data bus" (limitation [10]) in Nafeh and Walsky (Final Act. 8–9; Ans. 7–11). The Examiner finds the functions of the claimed "event engine" (limitations [6]–[9]) in Mather (Final Act. 6–7; Ans. 7–11). According to the Examiner,

under the broadest reasonable interpretation, "an engine can be a portion of a program" (Final Act. 8–9; Ans. 8–9 (citing MICROSOFT COMPUTER DICTIONARY (5th ed. 2002))).

Appellants contend, repeatedly, that the Examiner previously admitted that Mather does not disclose an "event engine" in the Final Office Action mailed October 31, 2011 (*see* Appeal Br. 10, 14, 16, 17, 38, 40, 52, 55; Reply Br. 2, 6).

Appellants' arguments do not apprise us of error in the rejection before us on appeal as set forth in the Final Office Action mailed August 29, 2013. The Final Office Action mailed October 31, 2011, and the Examiner's positions therein, are not germane to the issues now before us.

Appellants argue that "[t]he Examiner has created a completely different structure to the claim so that all of these functions may be performed by one engine instead of the two engines recited in claim 1" (Appeal Br. 10). According to Appellants, "[t]he claim has two structural elements of engines that are connected by a data bus" and "the Examiner's reading that relegates the engines to programs is inconsistent with the specification and renders the claim internally inconsistent because it is nonsensically to have two programs connected by a physical bus" (Reply Br. 2–3; *see also* Reply Br. 2 (claimed engines "are not programs but physical elements.")).

We do not agree. Appellants have not pointed to any particular teaching in the Specification that is inconsistent with the Examiner's interpretation. We have reviewed the Specification, and we find that the Examiner's interpretation of "engine" as "a portion of a program" is

consistent with the relevant description therein. Paragraph 95 of the Specification describes the claimed "matching engine," by way of example, as being implemented by "general purpose processors configured to matching orders . . . via hardware and/or software (e.g., programming and/or wiring)." Similarly, paragraph 108 of the Specification states, by way of example, that "event engine 213 may include a processor, a memory, and/or *any other component*" (emphasis added). Contrary to Appellants' argument, there is nothing nonsensical about inter-process communication via main memory, such as between two programs executed by a processor that is connected to main memory by a data bus). For example, paragraph 118 of the Specification states that "a bus may directly couple event engine and matching engine *in a same machine*" (emphasis added). We also note that claim 4 depends from claim 1 and is directed to an embodiment wherein the data bus transmits information to the matching engine by storing information at a memory location so that the matching engine can read data from the memory location. Accordingly, Appellants' arguments do not apprise us of error in the Examiner's interpretation of "engine" or the overall structure of the apparatus of claim 1.

Appellants contend that the Examiner has ignored the adjectives "matching" and "event" as applied to the two "engines" recited in claim 1 and thus has "not actually addressed the claim limitations" (Appeal Br. 10–11).

The Examiner responds that "Nafeh and Mather teach all the actual functions/limitations of the matching engine and the events engine as indicated in the action" (Ans. 10).

We agree with the Examiner. The fact that the references do not literally disclose programs labelled "a matching engine" and "an event engine" does not apprise us of error in the Examiner's rejection. Appellants fail to persuade us of reversible error because for each limitation, although the cited text does not repeat the recited claim limitation verbatim, one skilled in the art would understand that the recited claim limitation encompasses the disclosure cited by the Examiner. *See In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990) (whether a reference teaches a claim limitation "is not an 'ipsissimis verbis' test").

With reference to limitations [6]–[8], Appellants contend that Mather does not disclose "an event engine of the financial exchange" (Appeal Br. 11–16). According to Appellants, "an off exchange trading widget or GUI on a trader's computer is not a teaching or suggestion of any engine of a financial exchange or any part of a financial exchange at all" (*id.* at 12).

The Examiner finds limitations [6]–[8] in Mather at paragraphs 8, 17, 33, 54, 55, 57, 60, 88, 89, 91, 99 (Final Act. 6; Ans. 9).

Appellants' argument is not commensurate with the scope of what is claimed. Nothing in claim 1 excludes a client computer of a financial exchange from the scope "of the financial exchange." Appellants have not pointed to any definition in the Specification that modifies the ordinary meaning. The Specification describes the exchange only by way of example (*see, e.g.,* Spec. para. 136 ("example exchange is non limiting . . . any configuration of exchange components may be combined in any way in various embodiments.")). Paragraph 17 of Mather discloses "a financial trading system comprising . . . a trading widget module." We find that the

Examiner reasonably broadly construed "event engine of a financial exchange" as reading on the trading widget module of trading application 200 that submits orders to a financial exchange disclosed in Mather.

Regarding limitation [8], Appellants contend that the cited portions of Mather do not disclose "that placement of any order is conditioned on the occurrence of any event at all" (Appeal Br. 16).

The Examiner finds limitation [8] in Mather at, *inter alia*, paragraphs 17 and 88 (Final Act. 6; Ans. 9). The Examiner has interpreted "event" in light of paragraph 90 of the Specification which discloses that "[a]n event may include . . . any other occurrence, happening, and so on" (Final Act. 7; Ans. 9–10).

Mather at paragraph 88 discloses that the trading widget receives user input for creating orders, the user input including mouse click events. Paragraph 17 of Mather discloses that "[w]hen an order is received through the trading widget, the order placement module submits the received financial orders to the financial exchange" (*see also* Mather Fig. 7 (step 740 labeled "Receive Order Command from Mouse via Trading Widget" leads to step 745 labeled "Submit Order Electronically to Exchange")). It is clear from the above disclosure that the submission of an order to the exchange is conditional on receiving user input of order commands (e.g., mouse click events) from the user. We find that the claimed "event" reasonably broadly reads on the user input order command and that the Examiner reasonably found that the cited disclosure in Mather meets the argued limitation of claim 1.

Appellants dispute the Examiner's findings for limitations [9] and [10] of claim 1 (Appeal Br. 17–21; Reply Br. 3). According to Appellants, "[t]he quoted portions of prior art in the Examiner's Answer[] used to reject this claim[] do[es] not even mention orders at all or engines at all" (Reply Br. 3). Appellants also argue that "the cited motivation would not actually motivate a person of ordinary skill in the art to combine Mather, Nafeh and Walsky in a manner that would result in claim 1" because "information is transmitted from an event engine to a matching engine" (Appeal Br. 21). According to Appellants, "Mather is related to data outside of an exchange and not within an exchange at all" (*id.*).

Limitations [9] and [10] of claim 1 are respectively directed to transmitting "an indication to add the order . . . to the matching engine through a data bus" and "the data bus is configured to allow communication of the indication to add the order from the event engine to the matching engine."

The Examiner finds the "matching engine" of claim 1 in Nafeh at, *inter alia*, paragraphs 470–480 (Final Act. 8; Ans. 9–10). As discussed above, the Examiner finds the "event engine" of claim 1 in Mather; in particular, the Examiner finds the act of transmitting an order from the event engine to a matching engine (limitation [9]) in Mather at paragraph 54 (Final Act. 6–7). The Examiner finds the claimed "data bus" of limitations [9] and [10] in, *inter alia*, Walsky at paragraph 35 (Ans. 11).

Paragraphs 470–480 of Nafeh disclose an "Order Management and Processing System 370 (OMPS)" that includes, *inter alia*, "Order Matcher 340." Paragraph 54 of Mather describes a trader placing an electronic order

with an exchange that "ensures fair matching between buyers and sellers." Paragraph 35 of Walsky discloses a trading system server that includes a CPU and memory "connected via a bus."

According to Appellants, the cited paragraph of Mather "does not teach or suggest anything regarding a data bus, actions of an event engine, transmission to a matching engine, a queue, and/or seemingly anything related to the limitation" (Appeal Br. 17) and "[t]here is no mention of a bus, an event engine, or a matching engine in these portions at all" in the cited portions of Walsky (*id.* at 19). Regarding the "data bus" of limitation [10], Appellants argue that "[a] mere teaching of any trading combined with a mere teaching of some data bus is not a teaching or suggestion of the specifically arranged components of the claim" (Reply Br. 3).

We are not persuaded by Appellants' arguments. The Examiner has made specific findings for each of the limitations of claim 1. The fact that none of the references alone discloses every limitation of claim 1 does not apprise us of error in the rejection. *See In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) ("Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references."). As we have already explained above, in light of the Specification, the claimed matching and event engines encompass a general purpose computer programmed with the claimed functionality.

"The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). The operative question is thus "whether the improvement is more than the predictable use

of prior art elements according to their established functions." *Id.* at 415, 417. Here, the use of a data bus to allow communication between components of a computer is the epitome of a predictable use of a prior art element according to its established function. For example, the Microsoft Computer Dictionary cited by the Examiner defines "data bus" as "a system that connects different parts of a computer system" (Final Act. 8 (emphasis omitted)). The Examiner has determined that it would have been obvious to combine the trading functionality of Nafeh and Mather in a computer with communication between them via a "data bus" as disclosed in Walsky (*see* Ans. 9–11; *see also* Final Act. 8–9). We are not persuaded otherwise, because on the record before us, the preponderance of the evidence supports the Examiner's position. Appellants provide no evidence suggesting any unpredictability in combining the disclosures of Nafeh, Mather, and Walsky. Nor have Appellants provided any evidence that using a data bus to allow communication between two programs is beyond the ordinary skill in the art. In the absence of any such evidence, there would be at least a reasonable expectation that the ordinary artisan would have been able to incorporate the trading functionality of Nafeh and Mather with communication via a data bus as taught by Walsky. Therefore, we determine that the Examiner properly found that one of ordinary skill in the art would indeed have recognized that the order matching of Nafeh and the trading widget module of Mather could have been coupled by Walsky's data bus.

For the reasons above, we will sustain the Examiner's rejection of claim 1 under 35 U.S.C. § 103(a) as unpatentable over Mather, Nafeh, and Walsky.

Independent claims 9 and 18

Appellants separately argue the patentability of independent claims 9 and 18, but rely on similar arguments presented with respect to claim 1 (Appeal Br. 35–45, 50–60). We note that claim 9 requires "the condition defines a plurality of events" and we note that paragraph 88 of Mather discloses that the user input order command comprises a plurality of events (e.g., mouse button click events and scrolling with the scroll wheel). As such, we sustain the rejection of independent claims 9 and 18 for the same reasons.

Dependent claims 2–5, 19–22, 32, 33, and 39

Claim 2 requires, *inter alia*, "wherein the indication of the order is designated in a location in the stack with a higher priority than at least one second instruction that was pending in the stack before the indication is received."

The Examiner finds this limitation in Duesterwald at paragraphs 14 and 17–20 (Final Act. 24–25, 35, 47).

Appellants argue, *inter alia*, that the cited portions of Duesterwald do not "mention insertion of one instruction before any other instruction in a stack of instructions at all. Rather, these cited portions discuss moving machine instructions from stack locations to register locations" (Appeal Br. 23–24, 62–64).

We agree with Appellants. We have reviewed the cited portions of Duesterwald and we do not see any disclosure of designating "a location in the stack with a higher priority" as required by claim 2.

Accordingly, the rejection of claim 2, and its dependent claims 3–5, 32, and 33, is not sustained. *Cf. In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992) ("dependent claims are nonobvious if the independent claims from which they depend are nonobvious").

Claims 19 and 39 contain a similar limitation. Claims 20–22 depend from claim 19.

Accordingly, the rejection of claims 19–22 and 39 is not sustained.

Dependent claims 7, 8, 17, 24, and 31

Appellants separately argue the patentability of claims 7, 8, 17, 24, and 31 but rely on similar arguments presented with respect to claim 1 (Appeal Br. 33–35, 69–70). As such, we sustain the rejection of claims 7, 8, 17, 24, and 31 for the same reasons.

Dependent claim 10

Claim 10 depends from claim 9 and recites "the indication of the condition and the first indication of the order are received by an event engine of an exchange as a single communication."

The Examiner finds this limitation in Walsky at paragraphs 80 and 128 (Final Act. 12).

Appellants argue that the cited portions of Walsky make clear that "successive calls are made to an API after creation of a master order." and thus are not "received . . . as a single communication" (Appeal Br. 46 (emphasis omitted)).

We agree with Appellants. The cited portions of Walsky discuss modification of order parameters after the creation of a master order, so discloses multiple communications not a single communication.

Accordingly, the rejection of claim 10 is not sustained.

Dependent claims 11–14

Claim 11 depends from claim 9 and recites, *inter alia*, "adding the indication to add the order."

Appellants argue, *inter alia*, that "the 'adding the indication to add the order' portion of the claim is unaddressed completely" (Appeal Br. 46).

We agree with Appellants.

The Examiner did not specifically address the above limitation (Final Act. 28–30). In the Answer, the Examiner did not substantively respond regarding claim 11 (Ans. 26).

Accordingly, the rejection of claim 11 and its dependent claims 12–14 is not sustained.

Dependent claim 16

Claim 16 depends from claim 9 and recites "further comprising receiving, by the event engine of the exchange, an indication of the occurrence from a remote information source."

The Examiner finds this limitation in Walsky at paragraphs 80 and 128 (Final Act. 13).

Appellants argue that "[t]hese portions do not teach or suggest an occurrence of an event or an event engine of an exchange" (Appeal Br. 34).

Paragraph 80 of Walsky discloses that "the size or action on the order" can be changed "via calls to WorkOrder." These "calls" refer to "WorkOrder procedure calls" discussed in paragraph 76, which discloses that the Order Router 275 "exposes a Procedure based interface for creating and working orders, and creates and updates objects in response to events. These order and transaction objects can be messaged back to the user with various, messaging schemes." In other words, the Order Router 275 receives remote procedure calls in response to events.

We find that the Examiner reasonably found the limitation of claim 16 in the remote procedure calls in paragraph 80 of Walsky (Final Act. 13). Accordingly, we sustain the rejection of claim 16.

Dependent claims 25, 26, 30, and 38

Dependent claims 26, 30, and 38 depend from independent claim 1 and are not argued separately. Dependent claim 25 depends from independent claim 18, and is not argued separately. Accordingly, we sustain the rejections of claims 25, 26, 30, and 38 for the same reasons set forth above.

Dependent claim 27

Claim 27 depends from claim 1 and recites "the data bus is configured to allow communication only from the event engine to the matching engine."

The Examiner finds this limitation in Walsky at paragraphs 35, 38 and 75–80 (Final Act. 17).

Appellants argue that the cited portions of Walsky do not disclose "a data bus with any restrictions on functionality" (Appeal Br. 66).

We agree with Appellants. We do not see any disclosure that the data bus in Walsky is limited to communication only from the event engine to the matching engine.

Accordingly, the rejection of claim 27 is not sustained.

Dependent claim 28

Claim 28 depends from claim 1 and recites, *inter alia*, that "the event engine is configured to set a flag in a data structure to indicate that respective ones of the multiple events have occurred."

The Examiner finds claim 28 in Tupper at paragraphs 71–74 and 90 (Final Act. 42–43; Ans. 28–29).

Appellants argue that the cited portions of Tupper disclose "a flag is set if trades match each other" but do not disclose "an order being conditioned on any event occurring at all" (Appeal Br. 68).

We agree with Appellants. The flag in Tupper does not relate to conditions for an order, but rather discloses trades with matching key values having a flag set.

Accordingly, the rejection of dependent claim 28 is not sustained.

Dependent claim 29

Claim 29 depends from claim 1 and recites "the order is time stamped based on receipt by the apparatus, and in which the order is added to the queue at a priority based on the time stamp."

The Examiner finds this limitation in Nafeh at paragraph 471 (Final Act. 18).

Appellants contend that "[a] time stamp in a log of events, however, is not a teaching or suggestion of an order being added to a queue based on a timestamp" (Appeal Br. 68).

Paragraph 471 of Nafeh discloses that OMPS 370 includes Order Matcher 340 and accepts orders and prioritizes orders and that "all logged records will be time stamped." Paragraph 480 of Nafeh provides additional description of the prioritizing, and discloses that "Order Matcher 340 . . . places the order into a queue" and that "[t]he priority that the order assumes in the queue depends on the market trading rules, which takes into account factors such as the time of order placement."

We find that the Examiner reasonably found the limitation of claim 29 in the time-based prioritized order placement by Order Matcher 340. Accordingly, we sustain the rejection of claim 29.

Dependent claims 34 and 35

Claims 34 and 35 depend from claim 1 and recite "wherein the event includes a change in a value of a second financial instrument" and "wherein the event includes a change in a trading volume of a second financial instrument," respectively.

The Examiner finds these limitations in paragraph 488 of Nafeh (Final Act. 19–20).

Appellants dispute these findings (Appeal Br. 74–75).

We have reviewed the cited portions and we do not see any disclosure of an order conditional on any change in a second financial instrument.

Accordingly, we do not sustain the rejection of claims 34 and 35.

Dependent claim 36

Claim 36 depends from claim 1 and recites "the event includes a change to regulations that regulate an industry."

The Examiner finds this limitation in Nafeh at paragraphs 35 and 421 (Final Act. 20).

Appellants argue that the cited portions "do no[t] mention a change to a regulation or that any placement of an order is conditioned on anything at all" (Appeal Br. 75).

We agree with Appellants. We have reviewed the cited portions and although they disclose compliance with and reporting to regulatory authorities, we do not see any disclosure of an order conditional on any change to the disclosed regulatory authorities.

Accordingly, we do not sustain the rejection of dependent claim 36.

Dependent claim 37

Claim 37 depends from claim 1 and recites "wherein the event includes a change in credit rating of a company."

The Examiner finds this limitation in Nafeh at paragraph 653 (Final Act. 21; Ans. 35).

Appellants argue that the "cited portions do not teach or suggest that a placement of an order is conditioned on a change to a credit rating, but rather

teach a financial instrument that changes its value based on credit rating" (Appeal Br. 76).

We agree with Appellants. Paragraph 653 of Nafeh discloses "Related Hedging instruments allow traders to take a view regarding credit rating revisions by a certain date." Although Nafeh discloses that credit ratings change, it does not disclose that *placing* an order is conditional on the change.

Accordingly, we do not sustain the rejection of dependent claim 37.

DECISION

The Examiner's decision to reject claims 1–5, 7–14, 16–22, and 24–39 under 35 U.S.C. § 101 is affirmed.

The Examiner's decision to reject claim 36 under 35 U.S.C. § 112, second paragraph is reversed.

The Examiner's decision to reject claims 1, 7–9, 16–18, 24–26, 29–31, and 38 under 35 U.S.C. § 103(a) is affirmed.

The Examiner's decision to reject claims 2–5, 10–14, 19–22, 27, 28, 32–37, and 39 under 35 U.S.C. § 103(a) is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED